

What Emissions Should Be Measured Under SEPA?

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The following table lists various sources of GHG emissions and compares how each are incorporated by different jurisdictions into SEPA-like evaluations. The last column provides a comparison to the overlapping Climate Registry reporting scheme.

The California Air Pollution Control Officers Association (CAPCOA) guidance document was developed for local governments to address climate change impacts through California Environmental Quality Act (CEQA) review. The proposed King County SEPA ordinance would require proposals to estimate emissions from various sources to compare it to an average for that category. The Massachusetts (via MEPA) example sets forth a minimum set of emission sources to be quantified for a SEPA-like process but also allows flexibility on a case-by-case basis to include other sources. The Climate Registry is a proposed GHG reporting regime that includes many of the same emission sources that could be measured through SEPA.

| Sources of Emissions 6 Kyoto Gases (CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆) | CAPCOA Guidance <i>CEQA</i> | King County Draft <i>SEPA</i> | Massachusetts <i>MEPA</i> | The Climate Registry <i>Reporting</i> |
|---|---------------------------------------|--|----------------------------------|---|
| Direct Construction | | Yes | | Yes |
| Mobile Sources and Direct VMT | Yes | Yes | Yes | Yes |
| Stationary Sources and Direct Facility Emissions | Yes | Yes | Yes | Yes |
| Fugitive Emissions | Yes | Yes | Yes | Yes |

| Sources of Emissions 6 Kyoto Gases (CO2, CH4, N2O, HFCs, PFCs, SF6) | CAPCOA Guidance <i>CEQA</i> | King County Draft <i>SEPA</i> | Massachusetts <i>MEPA</i> | The Climate Registry <i>Reporting</i> |
|---|---------------------------------------|--|----------------------------------|---|
| Direct Agricultural Emissions | | maybe | | |
| Forestry Conversion and other land or aquatic vegetation disturbance | | Yes | | |
| Direct emissions from maintenance activities | | Yes | | |
| Extraction of Materials | Yes | Yes | | |
| Processing of materials | Yes | Yes | | |
| Transportation of materials | Yes | Yes | | |
| Other Indirect VMT | Yes | Yes | Maybe* | |
| Energy Use | Yes | Yes | Yes | Yes |
| Water Use | Yes | Yes | Possibly combined with Energy | |
| Waste | | | | |
| End-use | | | | |

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|---|--------------------|-------------------------|---------------|-------------------------|
| | <i>CEQA</i> | <i>SEPA</i> | <i>MEPA</i> | <i>Reporting</i> |
| emissions from product use | Yes | Yes | | |

“Direct” emissions generally means generated onsite

“Indirect” emissions are generally generated offsite and some are considered “embodied emissions”

Blank boxes = unknown

Concept of “net emissions” (emissions minus offsets or creation of CO₂ sinks) is evaluated during consideration of mitigation options

* MA acknowledges that some projects will have sources of emissions not explicitly covered by transportation, stationary sources and energy consumption. They may require additional modeling of emissions on a case-by-case basis.

Examples of Emission Sources

Direct Construction

-generators and equipment exhaust

Mobile Sources and Direct VMT

-directly related to project or non-project like company generated travel, residential commuting, includes distance and type of transport

Stationary Sources and Direct Facility Emissions

-on-site combustion processes,

Fugitive Emissions

-unintentional emissions, accidental releases such as leaks from industrial facilities, gas releases from drilling operations etc.

Direct Agricultural Emissions

-Livestock methane emissions, land-clearing

Forestry Conversion and Other Land or Aquatic Vegetation Disturbance

-Initial emissions plus permanent loss of CO₂ “sink”

Direct Emissions from Maintenance Activities

-exhaust from equipment, chemicals,

Extraction of Materials

-mining, timber harvesting, petroleum products (e.g. fuel and plastic products)

Processing of Materials

-energy used and emissions from processing metals, plastics, wood, fuel etc.

Transportation of materials

-for construction and operation –distance and type of transport

Other Indirect VMT

-traffic from associated development, indirect change in traffic patterns, VMT from customers (vs. company-owned), associated public services (parks, emergency response etc.)

Energy Use

-energy consumption of buildings, industries, infrastructure, associated public services

Water Use

-Quantity during construction, operation and closure, -energy used to provide water and dispose of polluted water can be calculated (question here about the GHG conversion factor -is there a tool for applicable to water use?)

Solid Waste

-emissions associated with disposal (usually off-site) of all types of waste (construction materials, agricultural, general trash, food)

End-use Emissions from Product Use

-fuel refining leads to fuel combustion by end-user, disposable packaging and waste, vehicles and VMTs,